

FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

21 FEB 1992

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IN REPLY REFER TO:

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FEB 24 1992

Federal Communications Commission  
Office of the Secretary

Honorable John C. Danforth  
United States Senate  
249 Russell Senate Office Building  
Washington, DC 20510-2502

Dear Senator Danforth:

Your letter to Mrs. Linda Townsend Solheim, Director of Legislative Affairs, has been referred to me for reply. Your constituents expressed concern to you regarding proposals to reallocate frequencies at 2 GHz that would impact the Rural Electric Cooperatives.

On January 16, 1992, the Commission adopted a Notice of Proposed Rule Making (Notice) in ET Docket No. 92-9 that proposes allocating 220 MHz of 2 GHz spectrum for use by providers of emerging technologies. With regard to licensees currently using portions of this spectrum, the Commission proposed to permit state and local government licensees, including public safety agencies, to continue indefinitely their current operations on a primary basis. Other users would be permitted to continue their current operations on a primary basis for a period of time to be established - such as 10 or 15 years. Subsequently, they would be permitted to continue operating only on a secondary basis. Expansion and new microwave systems would be permitted on a primary basis only at higher frequencies. In conjunction with the Notice, the Commission released a staff study of existing use of this spectrum and identified other suitable frequencies available for this purpose. To further facilitate accommodation of the competing demands for this spectrum, the Commission also proposed to permit negotiation of financial arrangements between existing licensees and parties proposing new services. Such an approach would facilitate access to this spectrum for services employing emerging technologies.

These provisions are intended to prevent disruption to the communications of the existing licensees, yet still provide the spectrum needed by U.S. companies to develop new and innovative telecommunications products and services and bolster U.S. competitiveness in world telecommunications markets. An example of one such new proposed service is the personal communications service (PCS), which the Commission is addressing concurrently in GEN Docket No. 90-314.

Honorable John C. Danforth

2.

The needs of the existing 2 GHz users are of importance to the Commission, and are being taken carefully into consideration. Please be assured that your constituents' concerns will be taken into account before a final determination is made, and for that purpose, I am making there letters part of the record in the two dockets discussed above, ET Docket No. 92-9 and GEN Docket No. 90-314.

Sincerely,

A handwritten signature in dark ink, reading "Thomas P. Stanley". The signature is written in a cursive style with a large, stylized "T" and "S".

Thomas P. Stanley  
Chief Engineer

ERNEST F. HOLLINGS, SOUTH CAROLINA, CHAIRMAN

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KEVIN G. CURTIN, CHIEF COUNSEL AND STAFF DIRECTOR  
WALTER B. MCCORMICK, JR., MINORITY CHIEF COUNSEL AND STAFF DIRECTOR

067  
90-314  
United States Senate

COMMITTEE ON COMMERCE, SCIENCE,  
AND TRANSPORTATION

WASHINGTON, DC 20510-6125

426  
February 10, 1992

Ms. Linda Solheim  
Director  
Legislative Affairs  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C. 20554


Dear Ms. Solheim:

Enclosed are copies of letters that were sent to me by the electric cooperatives and other suppliers of electric power in my state. My constituents are very concerned that they have continued use of their existing 2 GHz communications systems.

I would appreciate receiving information on this matter at your earliest convenience.

Thank you for your assistance.

Sincerely,

  
John C. Danforth

Enclosures (10)



2/18

# LACLEDE ELECTRIC COOPERATIVE

"Owned By Those We Serve"

1000 E. SEMINOLE ROAD

P.O. BOX M

LEBANON, MO. 65536

PHONE 417-532-3164

January 14, 1992

Honorable John Danforth  
United States Senate  
249 Russell Building  
Washington, DC 20510

Dear Senator Danforth:

It has come to my attention that there is a move on to relocate the utility industry's communication frequencies from 1.8 to 2.2 GHz band.

I respectfully request that you ask Mr. Al Sikes, chairman of the Federal Communication Commission, to allow us to keep the frequencies allocated to us. If he cannot do that, I ask that he offer an amendment that would allow "shared use" of the frequencies assigned to our rural electric systems.

Please be aware that moving the frequency from 1.8 to 2.2 GHz would cost \$8 million for Missouri alone.

As technology continues to expand we will make more use of this frequency.

Thank you for your consideration in this matter.

Sincerely,

Donald L. Clark  
General Manager

dm



New-Mac Electric Cooperative, Inc.

P.O. BOX 310  
NEOSHO, MISSOURI 64850

HIGHWAY 86 WEST

TELEPHONE  
(417) 461-1815

2/18

JAN 18 PM 10:55

January 14, 1992

The Honorable John C. Danforth  
United States Senate  
249 Russell Building  
Washington, D. C. 20510

Dear Senator Danforth:

Comm

I am writing to request that you ask Al Sikes, chairman of the Federal Communications Commission, to allow the rural electrics to keep the radio frequencies that have been allocated to us. If that cannot be done, we ask that you offer an amendment that would allow "shared use" of the frequencies assigned to our rural electric systems.

The cost of moving off our current frequency band of 1.8 to 2.2 GHz would be \$8 million in Missouri alone. Needless to say, this amount would be passed on to all rural electric consumers in the form of higher rates.

Anything you can do to help us in this matter will be greatly appreciated.

Sincerely,

New-Mac Electric Cooperative, Inc.

William J. Chabot, Manager

WJC:lc

218

# CHILLICOTHE MUNICIPAL UTILITIES

ELECTRIC, WATER, SEWER AND SANITARY SERVICES

715 WASHINGTON ST., P.O. BOX 140

CHILLICOTHE, MISSOURI 64601-0140

TELEPHONE 816-646-1664

FAX # 816-646-4181

January 9, 1992

Ms. Donna R. Searcy, Secretary  
Federal Communications Commission  
1919 M Street, N.W., Room 222  
Washington, D.C. 20554

RE: PCS Inquiry -- Gen Docket 90-314

Dear Ms. Searcy:

The Chillicothe Municipal Utilities hereby submits its comments regarding the Federal Communications Commissions PCS Inquiry and recent En Banc hearing regarding PCS.

The Chillicothe Municipal Utilities is a public owned utility operating a microwave in the 1850-2200 MHz band area. The system operates mostly inside the city limits. The electric plant of our Utilities is tied to our power grid through the microwave system at Cameron and Springfield (MO).

The electric plant is the main user of the microwave system. They use the microwave for remote computer operation and power metering. The remote metering site sends information for both purchase and sales of power. The remote computer operation is used for operating high power line switches and breakers. The electric plant also operates a pair of remote twin turbine generators with an estimated value of 11 million dollars.

The Chillicothe Municipal Utilities opposes a re-allocation of spectrum in the 1850-2200 MHz band for the development of the Personal Communications Networks (PCN). Our operation used leased lines in the past and we still use some for less critical items. The problem with leased lines is reliability and cost (i.e.. a monthly fee). If a leased line goes bad, we are at the mercy of the phone company for the time of repair. They may decide to repair the line at their convenience. This would cost us time and money on meter reading of power purchased. This situation could also cause injury and/or fatality on the remote switching devices operated by the computer. The cost to move from what we are using now would be tremendous as all the equipment is purchased and installed to match the entire system, right

down to the coaxial cable which would need to be changed if we were to be forced to change our frequency band.

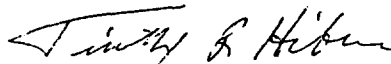
The Chillicothe Municipal Utilities understands that certain proponents of PCN are claiming that PCN can share the fixed microwave bands through the use of spread spectrum or other techniques. The Chillicothe Municipal Utilities is skeptical of these claims, and urges the FCC to review these claims carefully before authorizing PCN on a band sharing basis. The Chillicothe Municipal Utilities depends heavily on its microwave communications for remote operation of high voltage switching and generator operation. Any disruptions or interference may cause an accident costing millions of dollars or even worse a human life could not be tolerated.

In no event should a fixed microwave user be forced to relocate from 1850-2200 MHz band until:

1. There is adequate replacement spectrum made available in close proximity to the 1850-2200 MHz band.
2. Adequate time is allowed to construct replacement facilities.
3. The cost for any relocation is paid for by the PCN licensee. Any compensation for the relocation of existing facilities should be arrived at through negotiations between the existing user and the PCN licensee.

Very truly yours,

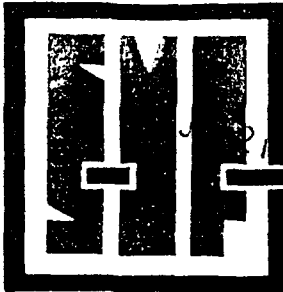
CHILLICOTHE MUNICIPAL UTILITIES



Timothy R. Hibner  
Electronic Foreman

TRH/s

cc: Mr. Ray Blakely, Gen. Mgr., CMU  
Senator Danforth  
Senator Bond  
Representative Coleman



# SHO-ME POWER CORPORATION

P.O. BOX D

(417) 468-2615

MARSHFIELD, MISSOURI 65706

FAX (417) 468-2611

JOHN K. DAVIS General Manager

January 17, 1992

2/18

The Honorable John C. Danforth  
United States Senate  
249 Russell Senate Office Building  
Washington, D. C. 20510

*Com*

Re: S218 - "The Emerging Telecommunications Technologies Act of 1991."  
Federal Communications Commission General  
Docket No. 90-314 - "Amendment of the  
Commission's Rules to Establish new Personal  
Communications Service."

Dear Senator Danforth:

Sho-Me Power Corporation is gravely concerned over the proposed move to re-allocate the 2 GHz microwave spectrum to the new "Personal Communications Service" (PCS). Our main backbone communications network over which we control, monitor and dispatch our electrical power grid uses 2 GHz microwave to carry data to and from the critical switching and load centers.

We selected the 2 GHz band initially in 1958 because of the reliability of that portion of the spectrum in regard to propagation characteristics and minimum of path outages. To move to a higher microwave band, which characteristically would have more path outages and communications interruptions, would impact seriously on our capability to keep dependable electrical power flowing to the several hundred thousand rural area consumers in Southern Missouri.

Our communications system is integrated with other REA power suppliers over the entire State of Missouri. We exchange critical coordination, protection and metering data with them and with our central power source supplier, Associated Electric Cooperative, Inc. in Springfield, Missouri. This vital information is carried over our 2 GHz microwave network and its continuous availability is of major importance to support the reliability of electrical power in virtually all the rural areas of the state and protects the interconnections with Private Utilities in Arkansas, Oklahoma, Kansas, Iowa and Illinois which becomes an integral part of the reliability for the power supply of a multi-state area.

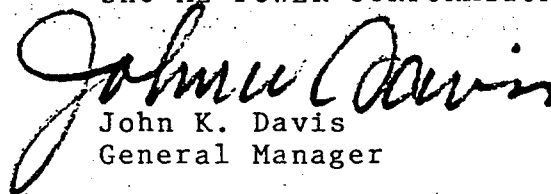


The Honorable John C. Danforth  
January 17, 1992  
Page 2

We need your assistance in protecting this frequency spectrum in order that we may continue to give the rural electric members the quality of service they have come to expect. We desperately need this proven and reliable microwave band so that this quality will not be impaired. Please do all you can in this matter to assure the rural electric consumers of Missouri and the power supply reliability of the Central United States is not put at risk.

Sincerely,

SHO-ME POWER CORPORATION



John K. Davis  
General Manager

JKD:ba

cc: Frank Stork, General Manager  
Association of Missouri Electric Cooperatives

Tom Layman  
Sho-Me Power Corporation

Private microwave systems are indispensable to utilities during catastrophic situations such as tornados and earthquakes. Without privately operated microwave systems, utilities would be unable to respond quickly and efficiently to natural disasters. The same events which cause utility outages result in major disruptions of the telephone network either because of congestion or downed systems. In those instances, without private microwave systems, utilities would not be able to respond effectively to emergency situations posing serious threats to life and property.

The loss of the 2 GHz band would have a severe impact on the ability of the cooperatives to offer safe and reliable service and increase cost to members served by the cooperatives. With the above considerations in mind, we wish to urge you to find alternatives to the relocation of the present 2 GHz licensees. Some of the options explored should include but not be limited to:

Finding other parts of the spectrum that would be just as suitable (if not more so than the 2 GHz band for use by the PCS systems).

Sharing of the band between existing and new technology on a co-equal basis.

Grandfathering existing licensees indefinitely.

Thank you for your time and interest with the above concerns. We realize that this a complex issue, but when you examine all the facts, we think that you will agree, the relocation of the present users of the 2 GHz band is not in your constituents best interest.

Sincerely,

  
James J. Jura  
General Manager

jm

cc: Frank Stork, AMEC



associated electric cooperative, inc.

2/18

2814 S. Golden, P.O. Box 754  
Springfield, Missouri 65801-0754  
417-881-1204 FAX 417-885-9252

*Am*

January 22, 1992

The Honorable John Danforth  
United States Senate  
Washington, D.C. 20250.

Dear Senator Danforth:

As you are aware, Associated Electric Cooperative is the bulk power producer and supplier to Missouri's 41 rural electric cooperatives serving 480,000 rural Missouri members. Missouri's electric cooperatives as well as other utility suppliers place extensive reliance on the private microwave systems operating in the 2 GHz band to meet critical communication needs. Associated's member cooperatives operate approximately 175 stations in the 2 GHz band. Other utilities in the state operate many more systems in this same band. A forced relocation from the 2 GHz band would have a severe financial and operational impact on Associated's cooperatives and their members.

More important than the financial cost of clearing the 2 GHz band, is the operational cost of clearing that band. As explained below, the reliability of the utility industries' communications facilities will be significantly degraded which, in turn, will have a direct adverse impact on the protection of the utility plant, the safety of members and employees, and the reliability of the utility system.

Some of the daily uses for which utilities depend on 2 GHz microwave systems include:

Protective relaying to remotely detect and isolate electric transmission lines experiencing outage situations, in order to prevent further property damage or personal injury.

Communication of telemetry data between a utility's substations, operations control centers, generating stations and other utilities.

Controlling and operating radio systems used for load control, environmental monitoring, and maintenance and restoration operations.



**Ozark Border  
Electric Cooperative**

U. S. Highway 67 South  
P. O. Box 400  
Poplar Bluff, Missouri 63901  
(314) 785-4631

January 20, 1992

Re: Frequency Change From 1.8 to 2.2 GHz

Honorable John Danforth  
United States Senate  
249 Russell Building  
Washington, D. C. 20510

Dear Senator Danforth:

I am writing this letter concerning the Federal Communications Commission's proposal to change the utility communication frequency band from 1.8 to 2.2 GHz. The cost of this change would be approximately \$8 million dollars in Missouri, and the cost would have to be paid by rural electric cooperative members. This seems like an unfair cost to be added to our rural electric members' bills without any gain to our members.

We understand the pressures that are being placed upon the Federal Communications Commission to make this change, but we feel consideration should be given to the thousands of rural electric cooperative members who will be paying to make a change in the frequency band. We would suggest some type of shared use of the frequency so that our members are not unfairly taxed for this change. The rural electric cooperatives of Missouri are proposing an amendment to S. 218, the "Emerging Telecommunications Technologies Act of 1991." We propose that at the end of Section 4, add the following new Subsection : (F) "Shared use". — the frequency assigned to an entity that provides electric service to the public shall not be withdrawn, but be eligible for shared use, provided that such shared use s' not cause harmful interference to the affected provider of electric service adversely affect the reliability of its power system.

We feel that the electric service, which is provided to the rural homes and businesses in Missouri is a very valuable asset to our state and we do not feel that our members should have to pay more for their electric service than is absolutely necessary. We certainly appreciate your continued support of the rural electric cooperatives and would ask your assistance in this matter. Thank you for your help.

Sincerely,

OZARK BORDER ELECTRIC COOPERATIVE

*Stanley Estes*  
Stanley Estes  
General Manager

SE:prp

cc: Board of Directors - Ozark Border Electric Cooperative



**Barton County Electric  
Cooperative, Inc.**

P.O. Box 398  
Lamar, Missouri 64759  
Telephone: (417) 682-5636

38 JAN 21 AM 3:44

2/18

January 15, 1992

Honorable John Danforth  
United States Senate  
249 Russell Building  
Washington, D.C. 20510

*[Handwritten signature]*

Dear Senator Danforth:

Mr. Al Sikes, chairman of the Federal Communications Commission, is considering giving frequencies allocated to the utility industry to other interested groups. The frequencies in the 1.8 - 2.2 GHz band have been used reliably by utilities for years. We have invested millions of dollars in equipment that would become obsolete if we lose that spectrum. The cost to replace them would be \$8 million in Missouri alone.

Please ask Mr. Sikes to reconsider the idea of giving away a spectrum already in use and encourage him to assign other frequencies available. If you feel you can not ask him to reconsider the idea please at least offer an amendment to allow a sharing of the spectrum.

Anything you can do to help would be greatly appreciated.

Sincerely,

*[Handwritten signature of Jim R. Fanning]*  
Jim R. Fanning  
General Manager

2/18

SAC OSAGE  
ELECTRIC COOPERATIVE, INC.

JAN 21 AM 3:43

1113 SOUTH MAIN • P.O. BOX 111  
EL DORADO SPRINGS, MISSOURI 64744  
417-876-2721  
FAX 417-876-5368

January 15, 1992

Honorable John Danforth  
United States Senate  
249 Russell Building  
Washington, D.C. 20510

*Comm*

Dear Senator Danforth:

We are greatly disturbed about the news that we hear about the possibility of being required to move off the frequency band of 1.8 to 2.2 GHz. This would cost Missouri utilities alone \$8 million dollars and a substantial amount of that would be paid by our G&T cooperative which has a great deal of microwave equipment on that frequency. This would raise electric rates to the members of Missouri in an already depressed economy in order for other people to have the luxury of mobile telephones, etc.

We have made substantial investment in equipment that operates on that frequency and the FCC approved it. If they were wanting that frequency, they should have not approved letting us use it before we invested in it!

I feel the unilateral effort by Al Sikes, Chairman of FCC, is unfair and probably illegal. Please urge Mr. Sikes to allow us to keep these frequency ranges that we are approved to use. These are much needed for the energy reliability for the people of Missouri.

Thanks for your considerations.

Respectfully,

*Harold Myers*

Harold Myers  
General Manager

HM/lt



**Central Electric  
Power Cooperative**

2106 Jefferson Street, P.O. Box 269 1: 28  
Jefferson City, Missouri 65102  
Telephone: (314) 634-2454  
Fax: (314) 634-3892

January 17, 1992

The Honorable John C. Danforth  
248 Russell Senate Office Building  
Washington, DC 20510

Dear Senator Danforth:

We desperately need your immediate help to assure that the electric cooperatives and other suppliers of electric power in our state and region can continue use of the 2 GHz frequency band. Let me emphasize that it is the proven reliability of the 2 GHz communications system that is most critical to the operation of our interconnected state and regional high voltage transmission system and power plants.

To remove our ability to use the existing 2 GHz equipment is analogous to removing the nerves which connect a persons brain to their limbs. To do such a thing would virtually paralyze our ability to function and invites disaster.

Your constituents presently receive reliable electric service at reasonable rates because we and other electric power suppliers across the nation have built sophisticated, modern control systems which utilize state of the art communications and computer technology.

Specifically, the 2 GHz microwave equipment used by the electric power industry permits the transfer of huge amounts of both digital and analog data needed to operate our state and regional interconnected systems. We have built computer based control systems which are dependent on high speed data communications for their operation. Without such systems, we cannot reliably interchange power with other utilities, control our power plants, switch our transmission network or detect and restore power outages.

We simply must be allowed to communicate by proven means if we are to function reliably. We must have continued use of our existing communications system to maintain the quality of service users of electric power have come to expect.

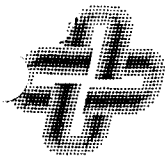
We respectfully request your help in this urgent matter. Please contact Frank Stork or me if you need additional information.

Sincerely,

CENTRAL ELECTRIC POWER COOPERATIVE

*Donald W. Shaw*  
Donald W. Shaw, Manager  
Engineering & Technical Services

DWS/dt



UTILICORP UNITED

10700 East 350 Highway  
Kansas City, MO 64138  
816-737-9300

2/18  
Robert K. Green  
President  
Missouri Public Service

January 3, 1992

PRIORITY

The Honorable John C. Danforth  
United States Senate  
SR-249  
Washington, DC 20510

Dear Senator Danforth:

As President of Missouri Public Service, a division of UtiliCorp United; I am writing to express our concern about the proposal by the Federal Communications Commission to force current users of the 2GHZ Microwave Spectrum to move from that spectrum to make way for emerging technologies. I urge you to contact the FCC to communicate the effect this change will have on your constituents and to encourage the appropriate Senate committee to hold a hearing on this important issue.

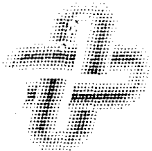
Missouri Public Service provides electric and natural gas service to more than 205,000 customers in western Missouri. In order to provide reliable service to our customers, Missouri Public Service relies heavily upon the 2GHZ Microwave Spectrum for:

1. Automatic generation control of our generating facilities;
2. System status monitoring and remote control of substation equipment to restore customer service quickly;
3. Telemetry information about our transmission ties with other utilities;
4. Toll-saving telephone lines to company facilities; and
5. Support for preventive maintenance to enhance the reliability of our electric system.

Our 2GHZ system is only six years old, with a 20-year planned life. This spectrum provides us the most cost effective and reliable communications system because of its propagation characteristics.

We estimate it would cost \$2 million to replace our system with another technology. This is five and one-half times our investment in the current system. We are concerned about the impact this will have on the rates we must charge our customers. We also are concerned that not only do





## UTILICORP UNITED

Honorable John C. Danforth

Page 2

January 3, 1992

other technologies cost more; but they will result in time delays, lack of independent control and increased equipment requirements.

Rather than displace the 33,000 existing stations now licensed nationwide, we suggest the FCC find another frequency home for the emerging technologies in the United States.

If the FCC cannot find another frequency spectrum for the emerging technologies, we are willing to work with the FCC to find a solution that would provide the most reliable service to our customers at the most economical cost. One way to achieve this would be to require that any new users operate their systems on a non-interference basis to existing users. If this is not possible and the FCC decides that it is more important to use the 2GHZ band for emerging technologies, we recommend the following:

1. The FCC find a new home with adequate spectrum for the existing users;
2. The FCC determine a methodology through which the new users of the band would be required to reimburse the existing users for the full cost of moving to a new spectrum or technology;
3. The FCC should grant existing users with recently installed systems evacuation waivers until the system life has been exhausted.

Because of the impact of this proposal on our ability to provide reliable service to your constituents, we request that you join us in expressing concern to the FCC and in supporting a hearing in the appropriate Senate committee.

Sincerely,

cc: Alfred C. Sikes